

Liacos-Person

Welcome to Mr. Liacos' and Ms. Person's Wiki Page!

Spring 2013

Fellows: Siddharth Gupta, Matthew Mueller, Devyn Curley, and Emily Taintor

Semester Outline

Fall 2012

Fellows: Kaitlyn Davis & Tucker Stone (R. Liacos) and Kenneth Westerman & Matthew Mueller (A. Person)

[STOMP Testing Curriculum: Semester Outline](#)

Activities

Week 1: Egg Drop

- Ask students to create a protective device for a hard boiled egg using cotton balls, coffee straws, rubber bands, index cards, and tape, so that the egg would not crack if dropped.
- Allow students to present their designs in front of the class and discuss why they felt their design would succeed.
- Test eggs.
- COMMENTS: Students had lots of fun with this activity, and we felt it was a great way to start off the semester and the testing unit. The presentations were a great component of this activity because students could see the wide variety of designs that came from the same materials.

Week 2: Introduction to Testing

- Use flashlights to compare products and identify the desirable qualities of each flashlight.
- Ask students, as a class, to identify desirable qualities of a car.
- Introduce pre-made lego cars and allow students to create their own tests for the cars, to decide which car is "best".
- Discuss as a class.
- COMMENTS: This has been our least successful activity so far. The students were not actively engaged in the lego car portion of the lesson, perhaps because there were only four cars for the entire class. We divided the class in half and provided each half of the class with two cars to test and compare. Because there were so many students in each group, it seemed that a few students were involved and the rest were taking a less active role and just observing. It also got a bit chaotic.
In the future, it may be better to have more cars to test, so that the groups can be smaller and every student can be involved.

Week 3: Using Testing to Support Design

- Ask students to recall important qualities in a car that were listed last week (i.e. speed, safety, gas mileage, etc.)
- Divide students into groups of four and ask them to design and create a lego car that satisfies at least one of these criteria.
- Encourage students to test and redesign their car throughout the lesson.
- Allow students to present their cars and discuss how their design satisfied the criteria that they chose, and what could be improved in their design.
- COMMENTS: Students successfully built cars, but were not very inclined to test their cars or seemed still unsure of how to test their cars (perhaps from the less successful lesson beforehand).

Week 4: Candy Corn Catapults (not from testing curriculum)

- Divide students into groups of three or four.
- Ask students to use legos, three rubber bands, and a plastic spoon to create a catapult capable of flinging candy corn a certain distance and with accuracy.
- Half way through the lesson, begin allowing students to test their designs with a previously created "target", from a set distance. We used half of the length of the classroom and a target size roughly 2' by 2', with a smaller target at the center of roughly 4" by 4".
- Encourage students to redesign if their catapult does not initially work.
- COMMENTS: Students enjoyed this activity, but only one group was able to make it on the target by the end of the lesson. Providing students with more of a variety of materials would be interesting.

Weeks 5 & 6: SAM Cameras

- Divide classroom into four groups of ~six students.

- Ask students to brainstorm the types of severe weather events they had studied in class, and focus on one of those events to create a stop-motion video.
- Students were asked to create a stop-motion video with SAM Animation that was meant to serve as an educational video to a third grader.
- COMMENTS: Activity took two weeks, with a half hour presentation between the two classrooms in the second week. Students enjoyed the activity, but often lost the focus of creating an *educational* video, in favor of a funny video. We only provided students with a white board and marker, but feel that the videos would have been more creative and interesting if we had provided them with a variety of material props (Legos?).

Week 7: Designing for Abby, the Dachsund

- Divide classroom into four groups of ~six students.
 - Ask students to brainstorm the types of activity all dogs have to do each day.
 - Tell students about the materials we will be providing them, and have each group develop a design to be approved before providing materials.
 - Allow students to make a wheelchair using one large PVC pipe, popsicle sticks, tape, and cotton balls.
 - Present preliminary designs to class.
 - Ask students to brainstorm the materials they would want, to redesign a wheelchair for Abby next week in STOMP.
 - COMMENTS: More materials should be provided, even in the preliminary week. Due to lack of available materials, many of the designs looked exactly the same. Students were not as serious about redesigning their wheelchairs for the next week as expected. Most groups believed their designs were the best and were reluctant to change anything, even when given the option of "ordering" their materials.
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Spring 2012 - with Anna Person

Fellows: Siddharth Gupta, Josh Elliott, Alana Lustenberger, Allie Wahrenberger

Semester Outline

Activities

- [Introduction to Robotics](#)
 - [Building Sturdy Structures](#)
 - [Building With NXT](#)
 - [Intro to Programming](#)
 - [Intro to MindStorms](#)
 - [Line Follower](#)
 - [Paper Towers](#)
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Fall 2011

Fellows: Zachary Cousens and Kristen Ford

Semester Outline

Activities

- Prototypes
- Hatchet
- SAM Animation